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ABSTRACT

An individualized infant screening/parent education program using the Kent Infant Development (KID) Scale to identify infants at risk for developmental delay and to provide parent education and counseling about infant behavioral development is examined here. The screening was integrated into established community agencies, utilizing current agency staff. A 3-hour training module, outlining administration and interpretation procedures, was offered to 12 early intervention specialists from 10 area community agencies. The counselors recruited 46 mothers of infants to complete a KID Scale. Mothers then received feedback on the developmental status of their infants, as well as counseling on how to relate to their infants in the near future. Results indicate that 4 of the screened infants were experiencing developmental difficulties and that 36 of the mothers benefited from talking about their child's development. All mothers and agency personnel attested to their satisfaction with the screening program. Findings show that existing personnel in a variety of community agency settings can be trained to counsel mothers about their infant's development. (RJM)

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Feasibility of an Infant Developmental Screening using Mothers' Reports

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Kent State University

A poster presented at the 104th annual meeting of the American Psychological Association: August 9, 1996, Toronto, Canada

Abstract

An individualized infant screening/parent education program using the Kent Infant Development (KID) Scale aimed to both identify infants at risk for developmental delay, and to provide parent education about infant behavioral development. The KID Scale is a caregiver report instrument that is empirically normed, with good reliability and validity.

The screening was integrated into established community agencies, utilizing current agency staff. A 3 hour training module outlining administration and interpretation procedures was offered to 12 early intervention (EI) specialists from 10 area community agencies. The EI counselors recruited 46 mothers of infants to complete a KID Scale. Mothers then received feedback on the developmental status of their infants, including counseling on how to relate to their infants in the near future.

Four of the screened infants were experiencing developmental difficulties. Thirty-six mothers benefited from talking about their child's development. All mothers and agency personnel attested to their satisfaction with the screening program. Costs of $33.50 per screened infant were estimated from professional time and agency overhead.

This study demonstrated that existing personnel in a variety of community agency settings can be trained to counsel mothers about their infant's development, in addition to screening the infants for delay, at reasonable costs in time and money.

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Purpose

An essential component of a community's Early Intervention Program, as mandated by Public Law 99-457, Part H, (IDEA) is the identification of all infants who can benefit from early intervention services (Gallagher, 1993). This law further stipulates that parents should play an integral role in the identification and intervention, encouraging their active participation and input (Eggbeer, 1995).

Two screening models have been developed in compliance with this mandate: center-based models, such as Child Development Days (Wright & Ireton, 1995) and Transdisciplinary Arena Assessment (McGonigel, Woodruff, & Roszmann-Millican, 1994); and mail-survey screening efforts, such as Infant Monitoring Questionnaires (Squires, Nickel & Bricker, 1990). Center-based approaches involve a mass-screening effort; typically occur on a few designated days per year; and result in high costs stemming from the use of a large meeting place and the presence of numerous health care professionals, including psychologists, nurses, therapists, and early education personnel . A mail-survey model employs a mass-mailing of developmental questionnaires to families with infants in order to screen for those infants eligible for early intervention services. These models vary in their goals and approaches to involving caregivers and their infants. Short-comings of such models include: 1) Limited opportunities for developmental feedback for caregivers of healthy babies; 2) Reliance on informal testing measures that lack norms and therefore can not go beyond broad screening identifications.

Model Description and Goals

The Individualized Infant Assessment model was developed in order to address the deficits noted in the other popular screening models. This model was created in the belief that an infant screening/parent education program must:

1) Fully engage parents in the screening process and serve as a parent education tool.
2) Produce useful developmental information that goes beyond mere screening.
3) Use professional time efficiently while minimizing administrative costs.
4) Encourage community participation.

We believe that early intervention professionals working in a variety of educational and community service settings can offer individualized developmental consultation for caregivers of infants if they are provided with standardized parent report instruments and have been trained in their interpretation relating to infant development. We investigated the feasibility of such an infant

identification and intervention model by measuring its costs in time and money and by getting estimates of counselor and parent satisfaction.

Method

Major Instrument

➢ The KID Scale is a caregiver report measure composed of 252 adaptive behaviors, assessing infant development in 5 separate domains.

➢ This test is empirically normed, demonstrates good reliability and validity in determining the developmental status of infants, and possesses prescriptive utility in the form of an individualized developmental timetable (Reuter & Wozniak, 1996).

➢ A computer scoring program prints out a report on the KID Scale results that allows for ease of interpretation, providing immediate feedback for the trained counselor's use.

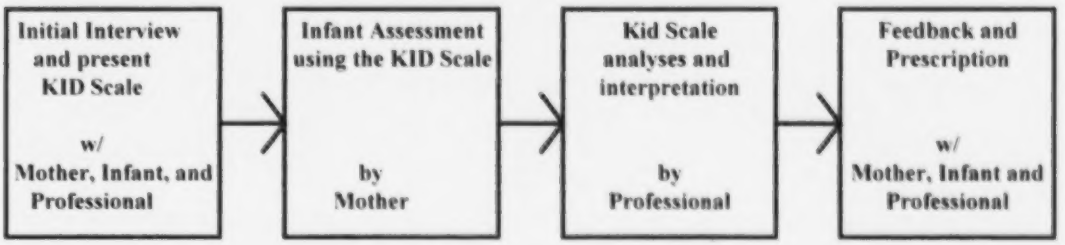
➢ The sound psychometric basis of KID Scale developmental diagnoses and prescriptive recommendations should support and educate EI specialists when they intervene with mothers and other caregivers of infants.

Procedure

In response to a letter of invitation sent to 40 agency and professional members of the county-wide early intervention group, 12 agencies indicated their willingness to participate and selected a staff member for training. Three hours of training in KID Scale administration, scoring, and interpretation was carried out with 12 Early Intervention (EI) specialists from 10 social service agencies in Portage County, Ohio. They were also given training in soliciting satisfaction ratings and securing caregiver permission for participation.

Following completion of the training, EI specialists began recruiting mothers of infants to complete a KID Scale. Many of these mothers had an established connection to the agencies, and therefore maintained an ongoing relationship with an EI specialist. Figure 1 demonstrates a progression of the individual steps involved in the screening process.

Figure 1. Individualized Infant Assessment flow chart.


Initial Interview and present KID Scale
w/ Mother, Infant, and Professional
Infant Assessment using the KID Scale
by Mother
Kid Scale analyses and interpretation
by Professional
Feedback and Prescription
w/ Mother, Infant and Professional

During the feedback session, each mother was informed of the assessment results, provided with information regarding child development, and given a printout detailing her babies developmental status in each of the five domains: Cognitive, Motor, Language, Self Help, and Social.

On the basis of the KID Scale results, infants were assigned to one of three developmental outcome groups: normally developing, at-risk, or developmentally delayed. Mothers of infants considered at-risk were given prescriptive suggestions and asked to complete a follow-up assessment in 2-3 months. Mothers of infants considered developmentally delayed were also given prescriptive suggestions and a recommendation that a referral be made to the local early intervention group for services was discussed. All mothers were encouraged to discuss any questions or concerns they had about parenting or infant development issues.

In order to evaluate degree of consumer satisfaction, mothers and counselors were asked to provide time, cost, and satisfaction estimates following KID Scale completion at the end of the initial interview, and also after the feedback session.

Results

➢ Thirteen EI specialists volunteered to be trained as counselors, with twelve actually completing training.

➢ They recruited 46 mothers from their current caseloads. A small proportion of the participants did not complete participation in the project (4/46), with 42 completed KID Scales collected.

➢ As anticipated, very few infants in this volunteer sample were found to be experiencing developmental difficulties, with one infant classified as developmentally delayed and three infants viewed as at-risk (see Figure 2).

➢ All mothers were encouraged to discuss the results of the KID Scale with an EI counselor and 36 out of 42 were able to avail themselves of this opportunity.

Time and Costs

➢ On average, mothers spent 31 minutes with an EI Specialist in an initial interview, 48 minutes filling out the KID Scale, and 36 minutes in a follow-up feedback session, for a total of 115 minutes devoted to participation.

➢ EI specialist training costs, including purchase of the complete training packet, trainer supervision, and trainee time was $80.00 per counselor (see Table 1).

➢ The amount of time devoted to the feedback interview, including preparation time for this meeting, varied greatly across participants, with 54 minutes on average.

➢ The average total time spent by professional staff on the intervention and parent counseling components of the project equaled 1.5 hours with each mother/infant pair (31 minutes initial interview, 54 minutes feedback).

➢ By multiplying the average time spent (1.5 hours) by a $15.00/hour estimated wage rate, the total cost including materials was $33.50 per each infant/mother participant.

Consumer Ratings

➢Mothers appreciated the experience and all noted they would recommend the screening to their friends with infants (100%). In describing their satisfaction with the screening, 100% of those mothers who responded to our request for evaluation chose positive descriptors, including valuable (59%), educational (76%), and fun (62%). A portion of those mothers also noted that the experience was somewhat frustrating (10%), or tedious (21%) (see Figure 3).

➢Counselors indicated that their experience was rewarding (77%), helpful to mothers (64%), and informative (48%). A significant proportion of the counselors (37%) also noted that the screening/counseling was hard work (see Figure 4).

➢In response to our request for informal feedback related to the feasibility of implementing the program at their agency, counselors noted that the program was beneficial to mothers but difficult to implement. Counselors mentioned that the program was time intensive and that it necessitated scheduling of more than one appointment. A few of the counselors also admitted to being uncomfortable with their level of expertise on infant development.

Discussion

This initial implementation of the Individualized Infant Assessment model suggests that this approach has both strengths and weaknesses.

Model Strengths

➢This study demonstrated that existing personnel in a variety of community agency settings can be trained to counsel mothers about their infants' development, in addition to screening the infants for delay, at reasonable costs in time and money.

➢The unanimous positive feedback given by mothers, coupled with counselors' belief that all who had participated benefited, suggests that this program has merit.

➢This model, based on a normed and standardized test of infant development that can be computer scored, is able to give mothers prompt and comprehensive developmental feedback on their babies.

Model Weaknesses

While the model is feasible and shows high consumer satisfaction, practical limitations must be acknowledged.

➢In order to carry out a community-based collaborative effort the authors spent a great deal of time organizing, training, and tracking the efforts of the individual EI specialists. To implement a similar program in broad-based community settings the same degree of coordinating would be necessary, at least at the outset of the program.

➢Counselors had difficulty scheduling individualized maternal feedback sessions. Although the intention of Public Law 99-147, Part H, suggests parents should be actively involved in the screening process, and that parent education is also a priority, it is often difficult to accommodate these provisions within community health and social service agencies given the size of counselors' caseloads.

➢The early intervention literature suggests a movement toward limiting the use of standardized measures with normative research, based on a distrust of psychometric procedures--a sentiment that was also mentioned by the non-psychologists who participated in this screening effort, who are actively involved in the delivery of community early intervention services.

Summary

➢This model can be replicated through the use of our training packet, recruitment and follow-up materials, and a computer generated developmental profile provided with the KID Scale, available from the authors.

➢In addition, a developmental curriculum is currently being piloted that will interface with the KID Scale printout to provide detailed prescriptive programming suggestions for EI specialists.

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PROGRAM IMPLEMENTATION COSTS

I. Estimated Training Costs

Trainee time (3 hours @$15 per hour)	45.00
Trainer time (2 hours @$15 per hour)	30.00
Training material	5.00
Total Training Costs	**80.00**

II. Estimated Costs Per Screened Infant

KID Scale Materials		
Face Sheets	.10	
Booklet (reused)	.50	
Answer Sheet	.36	
Scoring at KSU	8.00	
Total		**8.96**
Postage and phone calls		2.00
Counselor Time 1.5 hours @$15 per hour		22.50
Total Cost per Screen (out of pocket)		**33.46**

Table 1. Administrative and material expenditures involved in delivering intervention.

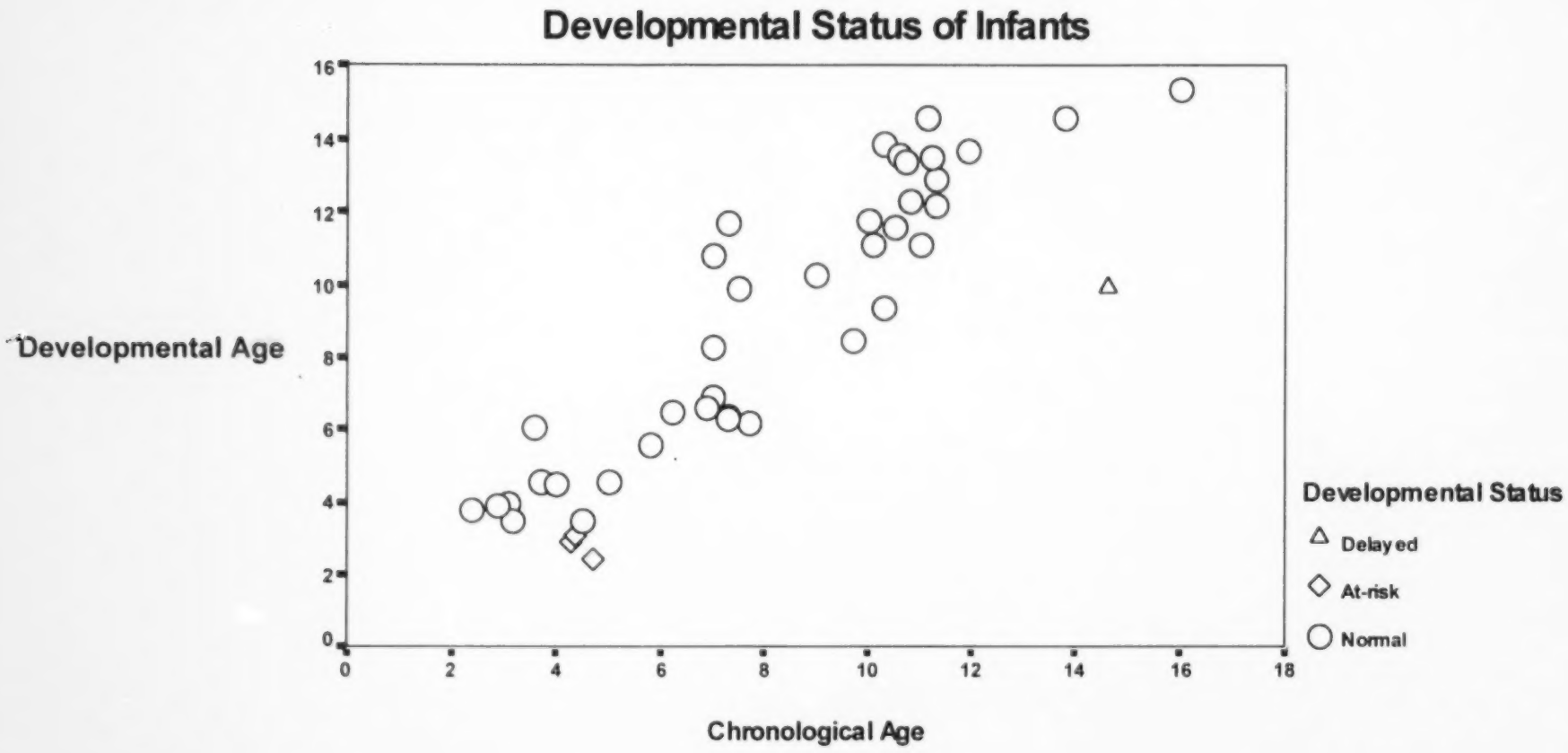

Figure 2. Developmental status of infant participants plotted by Full Scale DA and Chronological Age.

Figure 3. Maternal Satisfaction Ratings.

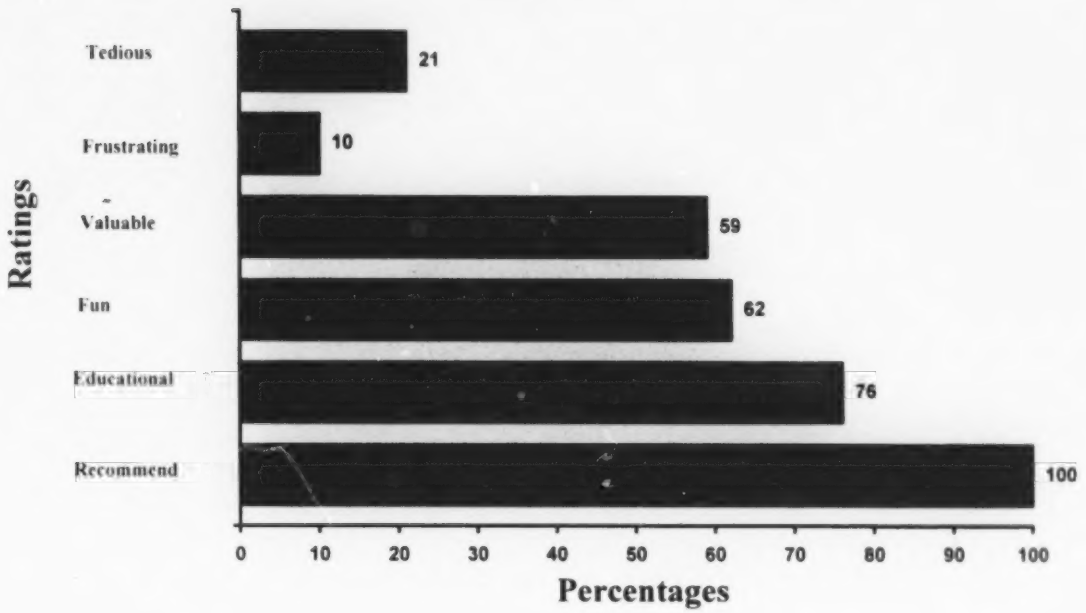

Figure 4. Counselor Satisfaction Ratings.